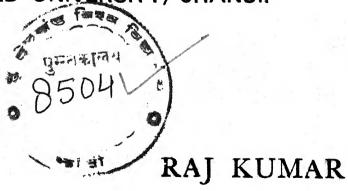
## ROLE OF EXPLORATORY LAPAROTOMY IN CHRONIC ABDOMINAL PAIN

THESIS
FOR
MASTER OF SURGERY
( SURGERY )



BUNDELKHAND UNIVERSITY, JHANSI.



1983

Department of Surgery, M.L.B.Medical College, Jhensi.

### CERTIFICATE

This is to certify that the work of DR. RAJ KUMAR on "ROLE OF EXPLORATORY LAPAROTOMY IN CHRONIC ABDOMINAL PAIN" which is being presented by him as a THESIS for M.S. (GENERAL SURGERY) Examination, was conducted in the department of surgery under my direct supervision and guidance.

He has put in the necessary stay in the department as per university regulations.

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### INTRODUCTION

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It is rightly said, "The abdomen is a magic box and so long it's lid remains unopened God only knows what lies within it".

Abdominal pain is one of the most common presenting symptom. A fairly large number of patients seek medical advice for relief of abdominal pain.

The diagnosis and management of abdominal pain has ever been a challenge to the physicians in general and surgeons in particular. The pitfalls in diagnosis are many and it is not an uncommon experience to find something entirely new at the time of operation, than what was once a reasonable clinical diagnosis.

In most of the patients of chronic abdominal pain there are other associated symptoms like vomitting, fever, altered bowel habits, loss of appetite and abdominal lump. Sometimes these patients come as acute abdomen with mechanical obstruction and perforation. Thorough history, clinical examination and relevant investigations can establish the cause in majority of cases. On the other hand in many patients pain is non-specific, the history does not suggest disease of any particular organ and physical signs are few or absent. Extensive investigations fail to show under lying cause of pain and patient often remains undiagnosed. But an organic cause for

the pain is present, so that for the great majority the doctors are left telling the patient that there is no serious cause. But in a number of patients there is a link between abdominal pain and internal pathology.

So it is to be taken cautiously for the future life of these patients, because if no cause can be established, the patient may become chronic attender and undergo repeated expensive and uncomfortable investigations, unless some reasonable explanation for the pain and other associated symptoms is given with appropriate treatment.

So occasionally even after detailed history, thorough physical examination and resourceful investigations, it becomes necessary to do exploratory laparotomy, to establish or confirm the diagnosis and treat the patient accordingly.

Therefore in the present study attempt was made to do investigative Laparotomy in all the patients admitted with chronic abdominal pain to find out the cause of undiagnosed chronic abdominal pain where pain was non-specific and pre-operative diagnosis was not made out even after all possible investigations and also to compare pre-operative and post-operative diagnosis in those cases where it was pre-operatively known. It was also under taken to assess the

relevance and yield of exploratory laparotomy in the patients with chronic abdominal pain.

# REVIEW OF LITERATURE

Pain is derived from the Latin word 'Poena' which means penalty or punishment. Pain is a protective mechanism for the body; it occurs whenever any tissue is being damaged and causes the individual to react reflexly to remove the pain stimulus.

Most diseases of the abdominal viscera are associated with pain at some time during their course. So, the correct diagnosis of abdominal disorder usually amounts to the correct identification of the cause of the abdominal pain.

Pain impulses from the abdominal cavity reach
the central nervous system by three routes from the
viscera via visceral afferents, that travel with
(i) the sympathetic and (ii) the parasympathetic
nerves, and from the pariental peritoneum, body wall,
diaphragm and root of mesentery via somatic afferents
that travel in (iii) the segmental spinal nerves or
phrenic nerve.

The route of a typical afferent from an abdominal viscus is as follows:
The axons of nerve ending in the wall of the viscus

follow the artery to the sorts and then through the collateral sympathetic ganglion without symapsing. They then enter the splanchnic nerve, traverse the paravertebral sympathetic ganglion, again without

synapsing, and join the spinal nerve via white ramus communicans. The cell body of this primary visceral afferent neuron is located in the spinal ganglion, from which central processes are sent to the posterior horn of the spinal cord through dorsal roots. These fibres ascend and descend one to three segments in the tract of Lissauer, and then and on second order neuron in the posterior horns of the cord gray matter. These neurons then give rise to fibres that cross immediately to the opposite side of the cord in the anterior commissure and pass upward to the brain in the spinothalamic and spinotectal tracts.

The fibres of the spinotectal tract terminate in the reticular areas of medulla, pons and mesencephalon and large number of collateral fibres from the lateral spinothalamic tract also terminate in the same areas. However, a small portion of the fibres pass all the way to the thalamus where they terminate in the intralaminar nuclei and in the posterior nuclear group. The tertiary sensory neurons transmit the impulse from the thalamus to the post central gyrus of cerebral cortex.

### Abdominal Pain :

Three distinct types of pain are involved in the general symptom complex of abdominal pain : visceral pain, parietal pain caused by visceral damage, and referred pain.

### Visceral Pain :

In clinical diagnosis, pain from the different viscera of the abdomen is one of the few criteria that can be used for diagnosing visceral inflammation, disease, and other ailments.

Any stimulus that excites pain nerve endings in diffuse areas of the viscera causes visceral pain. Such stimuli include isbhaemia of visceral tissue, chemical damage to the surfaces of the viscera, spasm of the smooth muscle in the hollow viscus, distention of a hollow viscus, or stretching of the ligaments. It tends to be diffuse and poorly localized, and has a high threshold.

### Parietal pain caused by visceral damage :

In addition to true visceral pain, some pain sensations are also transmitted from the viscera through nerve fibres that innervate the parietal peritoneum. The parietal surfaces of the visceral cavities are supplied mainly by nerve fibres that penetrate from the surface of the body inward. So the pain arising in the parietal peritoneum root of mesentries, and respiratory diaphragm, is mediated by sometic afferent in segmental spinal nerves.

Pain from parietal structures is, for the most part sharper and brighter than visceral pain; it is well localized and close to the site of stimulation.

### Referred pain :

Often, a person feels pain in a part of his body that is considerably removed from the tissue causing pain. This pain is called referred pain. More frequently it is initiated in one of the visceral organs and referred to an area on the body surface.

Chronic abdominal pain:

Chronic abdominal pain comes and goes at first, then becomes continuous with periodic exacerbations.

Pain in intestinal tuberculosis:

Pain is by far the principal manifestation, but is by no means always present. This is the chief presenting symptom in most of the series (Hoon et al., 1950; Anguli, 1950; Anand, 1956; Singhai, 1963; Abraham and Holdam, 1964; Chandra et al., 1967; Bhansali, 1968; Das and Gupta, 1975).

It usually commances in the centre of abdomen but later radiates towards the right iliac region.

Occasionally, it is referred to the epigastrium and it may have a definite relation to meals. It is usually most marked in the afternoon and may be increased by intake of food. The pain at first is transient, and then gradually persists for a longer period.

It may be cramp like stabbing or colicky in nature and is aggravated by pressure over the ileocaecal region. A throbbing or burning sensation in the

abdomen is said to be associated with the involvement of enlarged mesentric glands. Pain at the time of or after meals, is usually due to reflex peristalsis in the ileum or colon.

### Chronic peritonitis pain :

The abdominal pain is chronic and generalised, it is attended by constitutional symptoms, and some abdominal enlargement or other local signs.

### Pain in Maligment peritonitis :

It is always attended by much pain, constant and also in paroxyms. There is a great tendency to the rapid formation of fluid in peritoneal cavity which is often tinged with blood. It arises especially in middle age or advanced age.

### Generalized pain in abdomen :

In cases of chromic pain generalized over the abdomen and in the absence of constipation, diarrhoes and other causes, one might suspect cancer of intestine, of the pancreas or of the kidney or malignant peritonities. In visceroptosis, mobile kidney and mobile spleen with long pedicle pain is a constant symptom. In many cases the pain is an expression of psychoneurotic anxiety state. Children may suffer from recurrent abdominal pain due to worms infestation, but often no cause can be found.

### Chronic pain in lower abdomen :

If the patient complains of pain situated chiefly in the lower abdomen, one may suspect diseases of the intestine or rectum, appendicitis, cancer or other disease of the urinary bladder or uterus, pases abscess, lymphatic gland enlargement and pelvic peritonitis, extra uterine pregnancy and pyosalpinx also give rise to pain in lower abdomen. The fatigue pain of debiliated person may be referred to one or other iliac region.

### Chronic pain in upper abdomen :

Pain situated chiefly in upper abdomen may be due to various diseases of stomach, duodenum, liver, gall bladder and spleen. In the lesions of the organs of this region, pain is often referred to the scapula or to the root of nock, Among the painful affections of the stomach, may be mentioned, gastric or duodenal ulcers, gastritis, cancer of the stomach. In the diseases of liver and gall bladder, passive congestion, cancer, gall stones, chronic cholocystitis and perihepatitis are the commonest. Abscess of liver should be suspected in those who reside in tropical countries. Painful diseases of spleen are not common, the chief being infarction, enlargement of organ aids the diagnosis.

### Pain following previous abdominal operation :

After previous operations intraabdominal adhesions may form or nerves supplying the abdominal wall itself may be involved in the scar tissue, and give rise to persistant pain.

### LAPAROTOMY :

### Exploratory Laparotomy :

An emploratory laparotomy is carried out in conditions where the need for operation is recognised, but where a definite diagnosis can not be made out until the abdomen has been opened.

### Diagnostic laparotomy :

Diagnostic laparotomy can be defined as surgical emploration of the abdomen to establish a diagnosis, when there is doubt about the nature of a patient's primary illness.

Abdominal exploration has been performed since
the latter part of the Seventoenth Century. Plate in
Roonhuyse (1663) and Volter's Midwifery (1689) gave
a very plausible representation of the procedure.
However, the operations were performed infrequently
until the late 1870s when the American Surgeon.

J. Marion Sims, commented that "the time will assuredly arrive when - under more favourable circumstanoss - early opening of the peritoneal cavity for
inspection and weshing out or draining off septic

fluids will be possible". The nature of his own work did not provide the material for putting these ideas into effect, but for the remainder of his professional career he continued to advocate them, and his last public lecture was devoted to this subject.

With the advent of safe anaesthesia and antimicrobials, the mortality of laparotomy alone is now much less.

The risks, in terms of mortality and morbidity, of laparotomy in medical patients with undiagnosed disease have been reviewed by several workers (Geraci, 1959; Keller et al, 1965). The conclusion was that surgical intervention carried relatively little risk. Killer and Williams (1965) reported a complication rate of 15 percent for a series of 46 patients undergoing laparotomy for fever of undetermined origin and there were 2 deaths in their series (4 percent). Harville and Summer skill (1963) in reporting their experiences with surgery in patients with mild hepatitis recorded a mortality rate of 9.5 percent amongst those who survived.

From the published series, 10-15 percent complication rate has become accepted by many surgeons as the usual figure for abdominal exploration. This is regarded generally as an acceptable misk in the face of generally high yield of positive diagnosis.

Laparotomy findings were positive in 83 percent of Scott et al (1970) series, Hubbard and Harvis (1967) reported a positive yield of 41 percent, Geraci et al (1959) identified a lesioniin the 80 percent, and got a precise diagnosis in 60 percent. Sheen and Van Omen (1963) reported a positive diagnosis of 33 percent while Keller and Williams (1965) reported a diagnosis rate of 82 percent.

Criteria for a positive laparotomy were the visible lesion or histology of a biopsy specimen, obtained from that site, or from a blind biopsy, correlated with the history, clinical signs, symptoms and clinical course of the patient.

and hazards of Laparotomy for medical patients found that explorations of the abdomen established a diagnosis in 69 of 81 patients, when extensive investigations in the medical wards had failed to identity the basic disease process. The most favoured pre-operative diagnosis was confirmed in 52 patients and proved wrong in 17 instances. Four patients who underwent laparotomy with provisional diagnosis of malignancy were found to have remediable conditions. In the patients with non remediable disorders, some form of palliation was possible as part of the operative procedure. Failure to establish a diagnosis

at laparotomy was associated with a good prognosis over a 4-6 years follow up period.

The 81 patients in these series had all undergone extensive investigations in the hospital, supplemented in some cases by preliminary out patient procedures. The high positive yield of diagnosis at laparotomy, must therefore be accepted as a justifiable and useful result from the surgical procedure. Prospective follow up carried out in 11 patients out of 12 cases of negative laparotomies by Scott et al (1970) revealed that in the patients in whom no diagnosis was found at laparotomy with or without biopsy, he found that one patient died after 54 months after laparotomy from an unrelated cause, two had subsequently shown neurotic tendencies with symptomatology in multiple anatomical sites, the remaining eight patients are well, with no recurrence of systemic or abdominal symptoms warranting medical investigations. A negative laparotomy in this series, therefore, implied a good prognosis.

Mobile cascum with its chronic volvalus was discussed as a cause of abdominal pain by a number of workers. This condition was first described by Rokitansky in 1841. Volvalus of the right colon is least rate in older children and young adults, and among vegetarian population (Denerjee 1951). It occurs

when caecum and ascending colon have failed to adhece to the posterior abdominal wall and hang mobile on unnatural mesocolon (Carslaw, 1928), sufficiently to allow torsion.

In chronic vovulus of caecum frequent and recurrent attacks of slight discomfort, obstruction with vomitting and distention, are not un-common, and in some cases attacks have continued for several years before an acute and serious crisis, necessitating operation, has occured. In some cases of chronic or recurring volvulus the symptoms are very obscure. Seventy three out of hundred patients reviewed by Donhauser and Atwell (1949) had a history of psevious subacute or chronic symptoms.

Volvulus of the caecum occurs either as an acute condition, in which case, it is almost always fatal, or inchronic form. Lockhart Mummery (1934) operated three patients of chronic volvulus of the caecum and the results have been excellent.

Many reviews on abdominal pain appeared in the lest decades and abdominal tuberculosis was recognised as a clinical entity for the abdominal pain. Although Hippocrates gave an account of this disease process but later on Hoon et al (1950) discussed the disease in detail and gave a valuable classification of intestinal tuberculosis and this classification has subsequently been used by Faustain and Bockus (1959).

Work of Rankie, (1952); Faustain, (1959); Gerci, (1959); Piechaud, (1959); Recio, (1961) and Faulkner, (1964) on abdominal exploration for abdominal pain, were published time to time and these revealed that primary lesion responsible for the pain was gastrointestinal tuberculosis. On abdominal exploration they found that the condition manifested in various forms.

Hoon et al (1950) propounded valuable classification of the intestinal tuberculosis and this classification subsequently has been used by Faustain and Bockus (1959) and Abraham and Holden (1964).

Crohm, Grinzburg and Oppenheimer (1932) published a paper where they described a chronic inflammatory, non-tuberculous, granulomatous condition involving the terminal ileum which they termed 'regional ileitis'. Their results were based on the histopathological examination of the specimen. It was found that the lesion could effect the caecum and colon as well. And this disease entity also manifested by pain, as a main symptom.

The cicatrising lesions of gut are also responsible for abdominal pain. The term 'cicatrising lesion means all the conditions causing varying degree of distortion and stenosis of the iteum and colon lumen, which have fibroblastic reaction in the wall of the intestine and thickening of the wall.

These leisons may be of known actiology such as, tuberculosis, dysentry, typhoid and actinomycosis.

Other conditions are also there where the actiology is debatable, as, regional ileitis, jejunoileitis, ulcerative colitis, diverticulitis and other non-specific ulcerations. Mesentric thromobosis and reduction of strangulated hermia are also said to be responsible for this type of lesion.

Chandra et al (1967) in their series of 30 cases observed that the commonest age group was between 20 to 40 years and sex incidence was equal. On the basis of actiological diagnosis, the average age of a case of tubercular enteritis was 27.3 years, while that of non-specific ileocolitis group was 37.3 years. The females were found twice more succeptible to tuberculosis than the males. In the regional ileocolitis, there was predominence of males (60 percent).

Both tuberculous and non-tuberculous groups have almost identical symptoms and it is not possible to arrive at an actiological diagnosis from the symptoms along (Clark, 1938); Walpaw, 1938, Ukil, 1942; Crohp, 1958 and Chandra et al, 1967).

Abdominal pain is the commonest symptom in tuberculosis and non-specific ileitis and colities. Both Wig et al (1953) and Anand (1956) observed this in all their cases, while Hoon et al (1950), Banarjee (1950), Datta Gupta, (1958) described it to be main symptom. Thus the two conditions simulate each other so closely that distinction in between the two on clinical and radiological grounds, or from findings during operation might not be possible in many cases (Tayler, 1945; Hoon et al. 1950).

The existence of non-specific group is a matter is of controversy. Other workers had difficulty in differentiating tubercular from non-specific leisons of the bowel on the basis of histological examination.

Histologically, those cases displaying frank caseation, giant cells, epitheloid cells and round cells are accepted as tuberculer by all workers. Those exhibiting no casestion, but with giant cells and epitheloid cells, are also taken as tuberculer by most workers (Datta Gupta, 1958; Anand, 1961; Faustain, 1966; Atma Prakash et al. 1970). The cases exhibiting niether of the above feetures are controversial. Such cases show a non-specific type of round cell infiltreation in the bowel well or in the lymph nodes. Many of the workers have included such cases among the tubercular group for the reason that they had antitubercular treatment (Taylor, 1945; Wigett al, 1954; Bhansali et al 1968; Grewal et al, 1974; Das, 1975). This eltered the histological picture of the bowel lesion and in many such cases casestion was present in the lymph nodes.

Braasch and Mon (1967) from Lahey Clinic found that most common presenting symptom was abdominal pain (71.1) in the pathology related to retroperitoneal compartment, associated with weight loss, anorexia, vomitting, lever and other symptoms.

Diagnosis of the pathological nature of the disease of retroperitoneal compartment is made by laparotomy and biopsy. Pre-operative radiological investigations may be helpful. In Broasch's series, the correct pre-operative diagnosis was made in 37 percent cases.

As far the tumours are concerned, the majority that arise in the retroperitoneum are derived from the pancreas, kidney or adrenals. Thus Gill and his colleagues (1970) in a review of 134 retroperitoneal tumours, found that 87 were pancreatic, 23 renal, and 6 adrenal in origin. The remainder were 14 mesenchymal tumours and 4 lymphomas.

Pack and Tabah (1954), from Memorial Hospital.

New York reported 120 cases which accounted for only

2 percent of 60,000 tumours seen at their hospital

between 1926 and 1951. Out of 120 cases 17 were

benigh, They included 5 cysts as well as lipomas,

neuromas etc. Of the 103 malignant tumours, the most

common group was the sarcamas which accounted for 58

of these cases. The next largest group was the lymphomas 
24 cases.

Mercandier et al (1973) on abdominal exploration found chronic pancreatitis and pancreatic pseudocysts, as a common cause of abdominal pain.

A common and perplexing problem for the medical practioner is the patient with undiagnosed abdominal pain. In children and adolescents, it tends to be in right iliac fossa so that the question of recurrent attacks of appendicitis is raised, whereas in middle aged people it tends to be located in the upper abdomen and simulates a peptic ulcer. Most of these patients undoubtedly have psychosometic disease, but there is the constant anxiety that some organic condition, perhaps of serious nature, might be overlooked.

Much work has been published on the undiagnosed abdominal pain but the literature does not provide exactly comparable series of laparotomy cases.

In his important investigation on 200 children with recurrent abdominal pain, Apley, (1959) found organic disorder in 7 percent, of which about half had leisons in uninary tract.

Janik et al (1979) in their series reported
gastrointestinal enomalies, which involve arrest of
rotation about the superior mesentric vessels,
abnormal peritoned bands and obstruction with or
without volvulus, as a source of pain.

and the state of t

In the series of Rothman et al (1977), 27

patients underwent diagnostic laparotomy and 22 cases
on exploration revealed positive findings. Eight

patients had carcinoma Head of Pancrees, 5 on exploration revealed diffuse corcinomatosis, 4 were
suffering from pancreatitis, one mucocale of appendix,
one abdominal abscess, one retroperitoneal fibrosis,
foreign body in stomach in the submucosal plane in
one patient, and secondary omental infarction in one
patient accounted for pain in abdomen. In 5 patients
there were no positive findings on exploration.
On the basis of his findings, he commented that it is
appropriate to include laparotomy in the armamentarium
for the diagnosis of the cause of abdominal pain.

Wood house and Backers (1979) studied 28 patients and analysed 20 patients. Bight patients had psychiotric disease, 4 had irritable colon, enegatient was found having diverticulosis coli with irregular strictures on upper sigmoid, one patient suffered from cholelithiesis and one patient had long standing collapse of 3 thoracic vertebras.

In 1968, Devor and Knauft reviewing their records of patients with obscure abdominal pain who underwent laparotomy, concluded that "laparotomy is indicated if the operation is to be part of the patients over all treatment programme but is contrandicated if the

justification for surgery is the expectation of finding on anatomic abnormality". In their patient population no organic cause for pain was found in any patient at exploration and 65 percent of patients continued to have pain post operatively. By contrast. Griffen (1970) reported positive findings at laparotomy in twenty one out of twenty four patients with chronic abdominal pain. Eleven patients proved to have malignant disease and seven had inflammatory disease of pancreas.

The incidence and promosis of abdominal pain of obscure origin requiring admission to the hospital has been investigated by Rang, (1970) andhis collactues in Oxford region. Rather surphisingly, this was the tenth commonest cause of admission to hospital in males and sixth in females. A study of 427 patients during the year 1962 and 1963, in the Oxford, showed that unexplained abdominal pain is commoner in young females than in any other age groups in either sex. For the most part, these young women had pain in right iliac region and appendicectomy did not diminish the madmission rate for abdominal pain in this particular group. Twenty four percent of males and 38 percent females were readmitted to hospital; once or more within the follow up period, either for the abdominal pain itself or for other abdominal symptoms or for psychiatric reasons.

In patients with chronic abdominal pain every care must be taken to ensure that an organic leison, if present, is detected. If there is definite evidence of emotional disturbance, of which in adults, depression is commonest, then only treatment by psychotherapy and psychotropic drugs, is advisable.



### \*\*\***\*\*\*\***

### MATERIAL AND METHODS

This study was conducted at M.L.B. Medical College and Hospital, Jhansi to evaluate the value of exploratory laparotomy in patients suffering from chronic abdominal pain from May, 1981 to May, 1982.

All the patients attending surgical out patient department with complaint of pain in abdomen above two months duration were admitted to hospital. In these patients mostly cases were those in whom the pain was non-specific and no physical signs were present to ascertain the particular disease process. Those cases were also considered in whom on per abdominal examination physical signs were present and provisional diagnosis was made out on the basis of these findings. After admission only those patients were included in the present study who had undergone medical treatment previously, and those who were kept on conservative medical treatment, but could not be relieved of symptoms after the possible treatment previously prescribed for a certain duration of time.

So, the patients included in this study comprise a highly selected group who were treated only by internists and abdominal surgeons, so that all gymaecological and obstetric admissions were excluded.

METHOD OF STUDY:

History and physical examination

Selected patients were subjected to detailed

Buy Chirology Chair

history and physical examination which were recorded on the following lines :

<u>History</u>: Introduction - Name, age, sex, religion, occupation, address, socioeconomic status, date of admission and date of discharge.

Regarding the pain :

Duration of pain

Severity

Continuous or intermittent

Any relation to meals

Whether relieved or not after the passage of flatus and act of defecation.

Localized or generalized

Relation with act of respiration

Does it radiate to any side

Prior treatment (if any)

Apart from this complaint of pain, patient was also asked for other associated symptoms viz. Vemitting, Fever, loss of appetite, Diarrhoea, Constipation, lumpin abdomen, flatulence and dyspepsia, history suggestive of malaena and bleeding peranum and other symptoms if any.

### Femily history :

Details were asked about the family whether any other member suffered from the same type of ailment, history suggestive of tuberculosis, hypertension and diabetes mellitus.

#### Past history :

The patients were asked whether they suffered from any chronic disease or same type of ailment in the past or not.

### Personal history :

In the personal history patients were asked about their dietary habits, any addiction to intoxicants and smoking.

### Physical examination :

It was carried out on following lines :

General examination

Appearance of patient

Decubitus

Paller

Jaundice

Gyenosis

Clubbing

Oedena.

Lymph nodes

Hydration

Temperature

Pulse

Blood pressure

Systemic examination :

Per abdominal examination :

Inspection :

Shape of abdomen

Flanks

Umbilicus

Venous Prominence

Any visible lump

Any visible pulsation

Palpation :

If liver pelpable

If spleen palpable

Guarding

Rigidity

Tenderness

Rebound tenderness

Any pulsation

Any venous prominence

If lump paipable then its site, intraabdominal or extra peritoneal, number, size, margin, surface, consistency, over lying skin free or fixed to it, whether lump is fixed to deeper structures or mobile, externally ballotable or not, moves with respiration or not.

If any other positive sign was found, it was recorded.

Percusaion +

Shifting duliness

Fluid thrill

If lump present, whether resonant or dull on percussion Auscultration :

Nature of bowel sounds whether :

Normal

Diminished

Borborygmi or

Absent.

Hernial sites seen and per rectal examination was also carried out. On the basis of these findings patients were classified as :

- 1. Sex
- 2. Age at the time of onset of abdominal pain.
- Duration of symptoms eince the first episode of abdominal distress.
- 4. Associated symptoms with abdominal pain.
- 5. Abdominal physical findings.

Apart from this the other systems were also examined in detail.

### Investigations :

In all patients haemogram was done as a routine.

And heeping in view where indicated the following investigations - Liver function tests, fractional test meal, blood sugar, blood urea, serum alkaline phosphatase, serum amylase, serum glutamic oxalo acetic acid transminase, serum glutamic pyruvic acid transminase, bleeding time and clotting time were carried out.

Urine was examined routinely for albumin, sugar, and microscopically, where indicated, urobilingen examination was also done.

Stool examination was done for Cysts of protozoa and ova of parasitic helminths. Stool examination for occult blood and stercobilinogen was also carried out when indicated.

### Radiological examination :

For all the patients radiological evaluation included screening chest, barium meal series for upper gastrointestinal tract, barium enema, cholecystogram and intravenous pyelogram.

When suspecion arose about the mental and emotional state of patient the psychiatric check up was also under taken to know about these states of mind.

After these investigations, the patients were prepared for operation. And during operation the abdominal cavity was explored as a whole and organ or tissue diseased examined and the specimen removed on operation was sent for histopathological examination. Whereever indicated, peritoneal and mesentric lymph node biopsy was taken and examined histologically. Final diagnosis was made taking into consideration operative and histopathological findings and patients were classified as t

1) Whether any cause of abdominal pain found or not.

ii) Whether diagnosis changed or remained the same where pre-operative provisional diagnosis was made.

After the operation follow up examination of the patients was carried out till they were discharged from the hospital and asked about the symptoms which were present pre-operatively and patient classified as :

- 1) Improved.
- ii) Not improved.
- iii) If any complication occurred.



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# **OBSERVATIONS**

This study comprises of 60 patients of chronic abdominal pain admitted in surgical wards of M.L.B. Medical College Hospital, Jhansi, from May, 1981 to May, 1982. These patients were of both sexes and age groups varied from 5 to 65 years. All the patients included in this study had pain in abdomen for 2 months or more.

Table - 1
Showing sex incidence in patients with chronic abdominal pain

SI. No.	Seas		Number of patients	Persentage
1.	Male		84	56.7 - Inn
2. P	emale		26	43.3

Out of 60 patients studied, 34 were males (56.7%) and 26 females (43.3%), as shown in table No. 1. The number of patients do not show marked difference in sexus.

The number of patients in age groups 16-25, 14

(23.3%), 26-35, 13 (21.7%) and 36-45, 14 (23.3%) were
almost equal. In age groups 5-15, 46-55 and 56-65, the
number were 4 (6.7%), 10 (16.5%) and 5 (8.3%) respectively

(Table No. 2). Thus, the incidence of chronic abdominal
pain in younger and older age groups was quite low in
comparison to the active life period of parsons.

Table - 2
Showing age incidence in patients with chronic abdominal pain

Sl. No.		Ag ()	e Gr	) quo	Number of patients	Percentage
1.	5	*	15		4	6.7
2.	16	-	25		14	23.3
3.	26	•	35		13	21.7
4.	36	•	45		14	23.3
5.	46	*	55		10	16.5
6.	56		65		5	8.3

Table - 3

Distribution of patients with chronic abdominal pain according to the duration of pain

SI. No.	Duration of	Number of patients	Percentage
1.	2 months to 1 year	29	48.3
2.	1 to 2 years	12	20.0
3.	2 to 3 years	11	18.3
4.	Above 3 years	8	13.3

The maximum number of patients who came to seek advice after first attack of pain was in group of 2 months to 1 year of duration. After that number of patients decreased in each group. This shows that most of the patients studied in this series, sought medical advice earlier for the relief of pain.

The state of the s

Thus, 29 patients, 48.3% of studied patients, came within one year of the onset of pain, while 12 (20.0%) had pain of 2 years duration, 11 (18.3%) and 8 (12.3%) patients had pain of 3 years and above 3 years duration respectively.

Table - 4

Distribution of patients with chronic abdominal pain according to associated symptoms

Sl. No.	Associated symptoms	Number of patients	Percentage
1.	Constipation	28	46.7
2.	Vomitting	20	33.3
3.	Pever	15	25
4.	Loss of appetite	11	18.3
5.	Distantion of abdomen	10	16.7
6.	Diarrhoes	•	10.0
7.	Malaena	3	5.0
8.	Lump in abdomen	5	
9.	No associated symptoms	11	18.3

It was observed that except 11 patients all the 49 patients had varied symptometology associated with abdominal pain. The symptoms were fever, loss of appetite, vomitting, diarrhoea, constipation, maladma, distention of abdomen and lump in abdomen (Table No. 4).

After an interview with patients, it was found that 28 patients (46.7%) had constipation associated

with abdominal pain. Out of 28, 10 patients had had absolute constipation. The other 18 patients had had constipation off and on during their illness. On exploration it was found that the constipation was due to the acute or subscute intestinal obstruction, consequent to intestinal tuberculosis in 12 patients, non-specific ileitis with stricture of ileum in 3 patients, appendicitis in 3 patients, intraabdominal abscess with cicatrisation of terminal ileum in 1 patient, mobile caecum in 5 patients, recurrent volvulus of palvic colon in 1 patient, carcinoma caecum in 1 patient, carcinoma caecum in 1 patient, carcinoma descending colon in 1 patient and post operative adhesion in 1 patient.

The another common symptom, vomitting, was noted in 20 patients (33.3%). It was because of intestinal obstruction in 16 patients, appendicitis in 2 patients and cholecystitis in 2 patients.

Fifteen patients (25%) suffered from fever alongwith abdominal pain. On exploration the cause was attributed to abdominal tuberculosis in 12 patients, appendicitis in 2 patients and non specific ileitis in 1 patient.

Out of 11 patients, who had had loss of appetits; 5 were suffering from malignamey, 5 from inflammatory lesion of intestine and 1 from circhosis of liver.

Six (10.0%) patients were suffering from diarrhoes,

cause was intestinal tuberculosis in 4 patients and carcinoma caecum in 2 patients.

All the 3 patients in whom the history was suggestive of malaema, were suffering from malignancy of caecum and colon.

Distantion of abdomen was present in 10 patients.

This was due to the intestinal obstruction, consequent to inflammatory and malignant lesions of bowel.

Five patients complained of lump in abdomen.

Among these 1 had retroperitoneal fibrosercome, 1
pseudoparicreatic cyst, 1 hypertrophic ileocaecal
tuberbulosis, 1 carcinoma caecum and 1 hypertrophic
tuberculous colitis of descending colon.

Table + 5
Showing abdominal physical findings

S1. No.	Abdominal physical findings	Number of patients	Percentage
1.	Abdominal distention	10	16.7
2,	Visible peristalsis	3	5.0
3.	Guarding	14	23,3
4.	Rigidity	11	18,3
5.	Tendezness	53	68.0
6.	Lump in abdomen	8	13.3
7.	Palpable liver	N41	M41
8.	Palpable spleen	2	3,3
9.	Abnormal bowel sounds	7	11.7

On anglysis of abdominal physical findings it was found that 10 patients (16.7%) had abdominal distention due to intestinal obstruction. Visible peristalsis was noted in 3 (5%) cases. Guarding was present in 14 (23.30%) and rigidity in 11 (18.30%) patients. Abdominal tenderness was present in 53 (88.0%) patients. On palpation in 8 (13.30%) cases, intraabdominal lump was found. Abnormal bowel sounds were recorded in 7 (11.65%) cases, all suffering from abdominal pains as shown in table No. 5.

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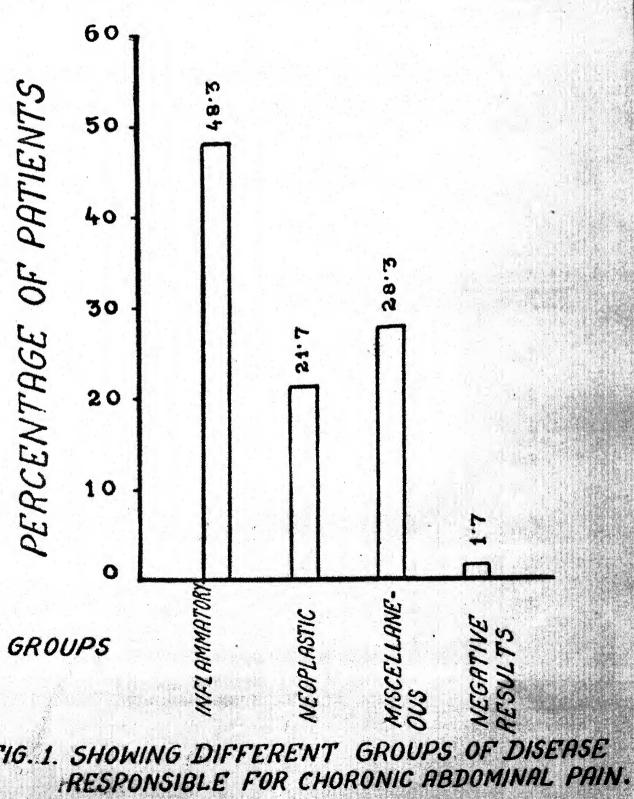


Table - 6
Showing findings on laparotomy and histopathological examination in patients with chronic abdominal pain

si. No.	Group of disease	Number of patients	Percentage
1			
Α.	Inflammatory disease		
	Abdominal tuberculosis	12	20
	Non-specific ileitis	3	5
	Appendicitis	8	11.7
	Chronic pancreatitis	1	1.7
	Chronic pancreatitis with pseudocyst	1	1.7
	Meckel's diverticulitis	1	2.7
	Chronic cholecystitis with cholelithiasis	2	3.3
	Intra abdominal abscess		1.7
	<b>7.53</b>	3N N	
в.	Neoplastic disease		
-	Carcinoma gall bladder8	4	1.7
	Carcinoma gall bladder wi metastasis in liver	eh 2	3.3
	Carcinoma lower end		1.7
	Carcinoma stomach	2	9.8
	Carcinoma caecum	2	3,3
	Carcinoma descending colon and pelvic colon		1.7
	Hodgkin's lymphoma of colon	14 Per 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	a ar
	Carcinoma head of pencreas		
- Au-	Renal cell carcinoma		•
e evan	Retroperitoneel		

1	2		
	Miscellaneous diagnoses		
	Duodenal ulcer	1	1.7
	Pyloric stenosis post gestric ulcer	1	1.7
	Pělycystic diseases of laver and kidneys	1	1.7
	Cavernous haemengioma liver with fatty change of liver	1	1.7
	Cirrhosis liver	1	1.7
	Mobile spleen	1	1.7
	Mobile spleen and kidney	1	1.7
	Crossed ectopic mobile kidney	1	1.7
	Mobile caecum	5	8.3
	Malrotated gut	1	1.7
	Redundant pelvic colon with recurrent volvulus	1	1.7
	Retroperitoneal fibrosis	1	147
	Post operative adhesions	1	3.7
	Total	ers v galas	
D.	Megative result		\$
	No cause of abdominal pain found		<b>3.7</b>
			A CONTRACT OF THE PARTY OF THE

On exploratory laparotomy in 59 (98.30%) out of 60 patients, a definite actiology for abdominal pain was established. The results are based on operative findings and/or histopathological examination.

On the basis of findings all the patients are classified in four croups :

- 1. Inflammatory disease.
- Neoplastic disease. 2.
- Miscellaneous diagnoses. 3.
- Nedative result. 4.

### Inflammatory disease

Twenty nine (48.3%) out of 60 patients suffered from inflammatory disease, 12 patients had intestinal tuberculosis, 8 appendicitis, 3 non-specific ileitis, 2 chronic cholecystitis, 1 chronic pancreatitis, 1 chronic pancreatitis with pseudopancreatic cvst. 1 mackel's diverticulitie and 1 intraebdominal abscess.

## Neoplastic disease

In thirteen (21.7%) of 60 patients, the cause of abdominal pain was neoplastic disease of abdominal viscera. On exploration it was established that 1 patient had carcinoma of gall bladder, 2 carcinoma gall bladder with metastasis in liver, 1 cardinoma lower end desophagus, 2 carcinoma of stomach, 2 carcinoma of caecum, 1 carcinoma of descending colon and polvic colon, 1 hodghin's lymphoma of ascending colon, 1 renal cell carcinema and 1 retroperitoneal fibrosaand the state of the state of recma.

# Silecolianeous Claunoses

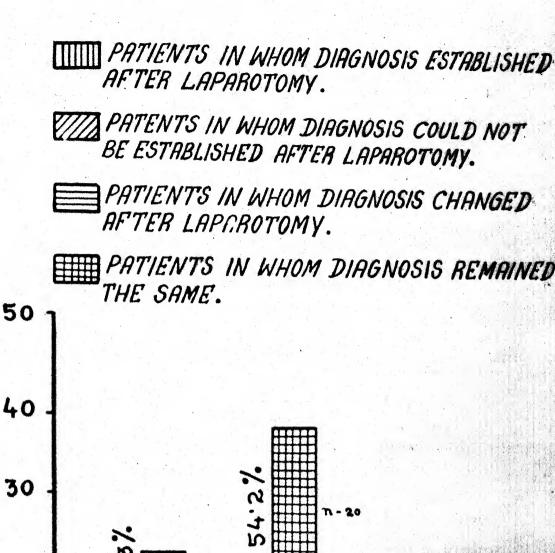
In this group it was found that some patients

had abdominal pain because of congenital anatomical abnormality of abdominal viscera or depenerative disease. Out of 60 patients 17 patients (28,3%) had suffered from such type of disease. On laparotomy it was disclosed that the pain was due to duodenal ulcer in 1 patient, pyloric stenosis due to post gastric ulcer in 1 patient, polycystic disease of liver and kidneys in 1 patient, fatty change of liver with cavernous haemengioma liver 1 patient, cirrhosis liver 1 patient, mobile spleen 1 patient, mobile spleen and kidney 1 patient, cross ectopic mobile kidney 1 patient, mobile caecum in 5 patients, malyotated gut 1 patient, recurrent volvulus pelvic colon due to long nesocolon i patient, retroperitoneal fibrosis in 1 patient and post operative adhesion in small intestinal loops in 1 patient.

### Megative result

One 23 years old male patient had abdominal pain for 6 years. Inspite of all possible investigations preoperative diagnosis could not be made out and even after exploratory laperotomy diagnosis could not be established.

In this study no primary psychiatric illness was noted in any patient. Three patients suffered from psychosomatic disorders which were secondary to the chronic abdominal pain.



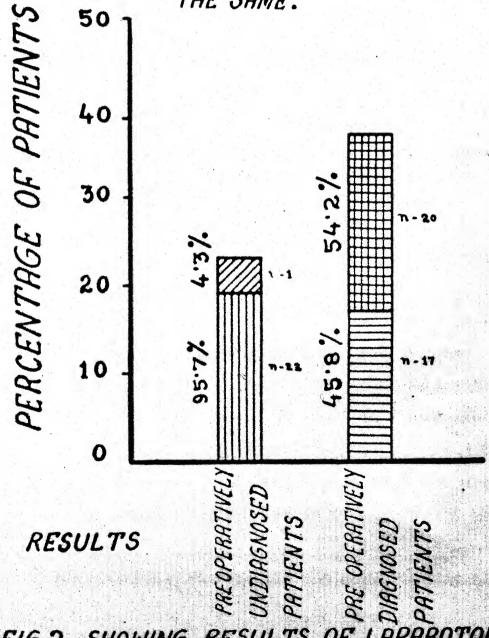


FIG.2. SHOWING RESULTS OF LAPAROTOMY ON DIAGNOSES.

Table - 7
Showing results of laparotomy in patients with chronic abdominal pain

Sl. No.	Maria 7	Number of patients	Percentage
	Patients, who could not be diagnosed pre-operatively	23	38.3
	1. Undiagnosed patients where diagnosis established after laparotomy.	22	95.7
	<ol> <li>Patient, in whom diagnosis could not be established.</li> </ol>	1	4.3
в.	Patients, who were diagnosed preoperatively.	37	61.6
	<ol> <li>Diagnosed patients where diagnosis changed after laparotomy</li> </ol>	17	45.8
	2. Diagnosed patients where diagnosis remained the same after laparotomy.	20	54.2

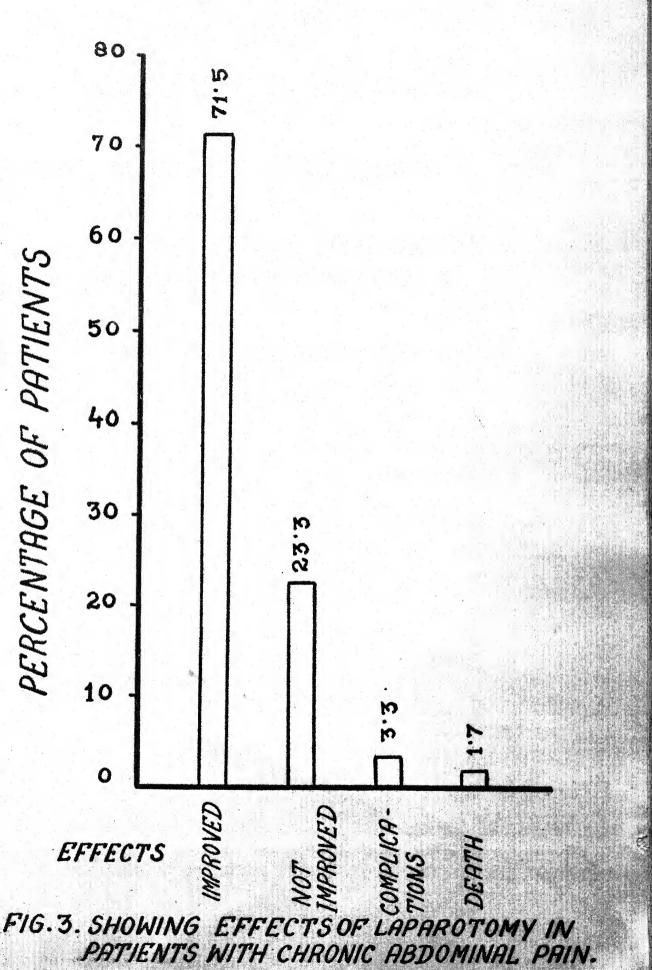
On analysis of results of laperotomy the patients are grouped as shown in Table No. 7.

onceed preoperatively. In these patients the clinical history, physical examination and investigations could not lead to the diagnosis of the disease. The laparotomy was performed and diagnosis was established in 22 (95.7%) cases. In one case (4.4%) no diagnosis could be established. Out of 22 patients in whom diagnosis was established. Out of 22 patients in whom appendicities one patient had macked's diverticulities.

In 1 patient the pain was non-specific and the serum amylase level was within normal limits. In this patient no provisional diagnosis was made. On exploration it was found that the pencreas was hard in consistency and nodular and this was proved chronic pancreatitis on histopathological examination. One patient was found suffering from abdominal tuberculosis. One patient who was having diffuse abdominal pain and used to have distention of abdomen usually after meals, was diagnosed as a case of non-specific Iletis after laparotomy and histopathological examination of the resected cicatrized part of ileum and mesentric lymph node. In one patient duodenal ulcer was found to be the cause of abdominal pain. In 4 patients the cause of pain was attributed to mobile caecum. One patient had abdominal pain due to mobile spleen. In one patient on abdominal exploration, the liver was found diseased and there were multiple hasmangiama on the surface of liver, histopathological examination revealed fatty change of liver. One patient suffered from abdominal pain because of retroperitoneal fibrosis and another one because of multiple post operative adhesions in small intestine. Two patients had pain in whole abdomen, laboratory investigations failed to show any disease of abdominal viscers, and radiological examination revealed a nonfunctioning gall bladder. On laparotomy it was found that there were stones in gall bladder and histopathological examination revealed adencarcinoma of gall bladder.

In another group 37 patients were diagnosed preoperatively. But after laparotomy and histopathological examination, the diagnosis changed in 17 (45.8%) patients and remained the same in 20 (54.2%) patients. So out of 17 patients in whom diagnosis changed after leparotomy 6 patients were diagnosed as cases of abdominal tuberculesis preoperatively. in 2 patients on exploration the intestine was found inflammed and having multiple strictures, mesentric lymph hodes were also enlarged operative findings simulated it to the abdominal tuberculosis, but histopathological examination established the diagnosis of non-specific ileitis. In one patient, no evidence of abdominal tuberculosis was found and the symptoms were due to the appendicitis. One patient was found having congenital malrotated gut, consequent to which the patient had abdominal pain. In another 2 patients there were lumps in right iliac fossa and patients had intestinal obstruction. On exploration it was revealed that one patient had an intraabdominal abscess which was due to the very old perforation of appendix and the terminal ileum loops were adhered:

in a mass there, while another patient had volvulus of caecum with intestinal obstruction. Two patients were diagnosed as cases of chronic cholecystitis with cholelithiasis. On laparotomy in one patient, the gall bladder was found fibrotic and it was performed at the fundus and the stone was imprisoned in between the visceral peritoneum of gall bladder and gall bladder proper, while another patient proved to be suffering from adenocarcinoma of gall bladder, because of long standing cholelithiasis. One patient who was diagnosed as a case of duodenal ulcer was also found suffering from chronic cholecystitis. In one, 46 years old female patient, who was suffering from chronic cholecystitis, laparotomy and histopathological examination of liver tissue, disclosed that she was also having cirrhosis of liver. One patient, who had a tender lump in right hypochondrium at the site of fundus of gall bladder, was diagnosed as a case of empyma of gall bladder. On abdominal exploration it was found that a cyst was present on the inferior surface of liver just adjacent to the fundum of gall bladder, other than that there were multiple cyst in the liver and both the kidneys. In one case the clinical history and radiological examination was suggestive of achlegia cardia, but laparotomy revealed carcinoma of lower part of desophagus. One patient, who was diagnosed as a case of pyloric stemosis due to cicatrization of gastric ulcer, turned out cercinoma of pyloric end of stomach. In another patient a diagnosis of carcinoma of ascending colon was made, but on histopathological examination it was reported to be Hodgkin's lymphoma of colon. One patient had a lump in left lumbar and iliac region, barium enema showed the narrowing of lumen of colon. It was thought to be because of carcinoma of descending colon. On laparotomy the findings were suggestive of hyperplastic tuberculous colitis, and the histopathelogical examination of the itssue taken confirmed the diagnosis of tuberculoses. Exploratory laparotomy disclosed hypernephroma in one patient, while the intravenous pyelogram done pre-operatively was within normal limits and the case was diagnosed retroperitoneal sarcoma. One patient of retroperitoneal fibrosarcoma presented an unusual diagnostic problem. On physical examination a cystic lump was present in epigastrium, which gave rise to filling defect in barium meal examination of stomech and diagnosed as a case of pseudo pancreatic cyst. On exploratory laparotomy the lump was found arising from the retroperitoneum and protruding through the lesser sac. The whole mass was resected and the histopathological examination established the diagnosis of fibrosarcoma.



In 20 patients (54.2%) diagnosis remained the same after laparotomy as it was pre-operatively. On exploration, it was confirmed that 10 patients had abdominal tuberculosis, 1 pseudopancreatic cyst with pancreatitis, 1 pyloric stenosis because of healing of gastric ulcer, 1 mobile spleen and kidney, 1 crossed ectopic mobile kidney, 1 recurrent volvulus of pelvic colon due to congenital long meso colon. Two patients suffered from carcinoma caecum, 1 carcinoma of stomach and 1 carcinoma of head of pancreas, One patient had pain due to carcinoma of descending colon.

Showing effect of laparotomy in patients with chronic abdominal pain

SI. Results		Number of patients	Percentage	
1.	Improved	43	71.5	
2.	Not improved	14	23.3	
3.	Complication	2	3.3	
4.	Death		1.7	

After the exploratory laparotomy 43 (71.5%)
patients improved post operatively. The number
includes all the 29 patients who had suffered from
inflammatory diseases and 14 had congenital anatomical
abnormalities of abdominal viscers.

Fourteen patients were not relieved of their symptoms completely as 13 of them were suffering from advanced intra-abdominal malignancies and 1 with retroperitoneal fibrosis.

Two patients developed complications postoperatively and one died who was suffering from Hodgkin's lymphoma of ascending colon.



В



M

Photo. i A & B - Photograph of barium meal skiegram enteroposterior and lateral views - Retro-partoneal fibrosarcama displacing the stemach.

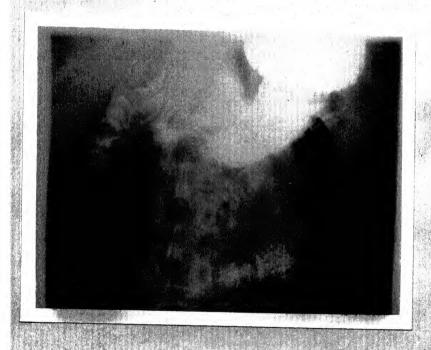


Photo. 2 - Photograph of bardum meal stringram showing widened dupdened loop 1 A case of caseinance of head of panaroses.



Photograph of burius meal skingses showing converting of lunes of tencalcul Living : A case of hyperplantic tulesculools of living



Photo 4 - Photograph of barium enems oblegges showing instrucing of luman of colons A case of hypoglastic telescolous colities



Photo. 3 - Photograph of Intravenous upogram should the left kildney in cight filter region & A cape of exceed kildney estopies



photo. 6 - A case of miliony abdominal tuberculosis, multiple tuberculos seen in mesontery and intestinal



Photo: 7 - 5 stricture is seen in flow in a patient of intestinal tuberculosis.



<u>Photo. B</u> - Cardinons of cascum vigualized on laparotomy.

DISCUSSION

<del>\*</del>

Chronic abdominal pain remains an important medical and surgical problem. The results of diagnosis and therapy are imperfect and hospital readmission for the same condition is frequent. This study was designed to determine if there is any relevance of exploratory laparotomy which can provide clues as to the eventual course of patients with chronic abdominal pain.

In this series, 60 patients were studied who were treated by general surgeons only, so all gynaecological and obstatric admissions were excluded.

In those 60 patients who underwent exploratory laparotomy 56.7% percent were male and 43.3 percent, female. The number was almost equal and did not show significant difference in sense. The patients included in the study were from all age groups which ranged from 5 to 65 years of age. It was found that the incidence of chronic abdominal pain in younger and older age groups was quite low in comparison to the active life period of persons. All patients had had abdominal pain for two months or more. The maximum percentage of patients (48.3%) sought madical advice within one year of first attack of abdominal pain and after that the number of patients decreased gradually.

Twenty percent patients had had pain of two years duration while 18.3 percent and 13.3 percent had pain of 3 years and above 3 years duration respectively. So, it is seen that most of the patients came to seek medical advice earlier comparatively. On analysis of associated symptoms and abdominal physical findings in the patients with chronic abdominal pain, it was seen that they did not provide clues for pre operative diagnosis except few cases namely mobile spleen and kidney, carcinoms of stomach, carcinoms of cascum and carcinoms of descending colon.

In our series, 98.3 percent of the 60 petients were proved to have a definite cause for abdominal pain. The pain was because of the varied actiology. In 20 percent of cause abdominal tuberculosis was found to be the cause of abdominal pain. It is supported by the results of Robert, (1930), Rankie, (1952) and Fenetain. (1959) where they reported that abdominal pain is the usual manifestation of abdominal tuberculosis. Appendicitis was also disclosed as a cause of abdominal pain in 11.7 percent cases. In 3.4 percent cases chronic pancreatitis with pseudocyst were found responsible for abdominal pain. These findings are comparable to the work of Marcandier et al (1973) where they reported an abdominal exploration chronic pancreatitis and pancreatitis and pseudocyst as a Cause of

abdominal pain. In some patients chronic cholocystitis with cholelithiasis, meckel's diverticulities and intraabdominal abscess were noted to be the cause of abdominal pain.

The diagnosis of non-specific ileitis remained a matter of controversy. Five percent cases were diagnosed as abdominal tuberculosis pre-operatively but on exploratory laparotomy, they were found to be cases of non-specific ileitis. On histological examination of lymph nodes and resected dicatrised part of intestine, the diagnosis of non-specific ileitis was established on the basis of round cell infiltration in the tissue and other histopathological criteria. On the other hand Taylor (1945), Wig et al (1954) Bhansali et al (1968) Grewal et al (1974) and Das (1975), found same type of histopathological picture in their series of work, but diagnosed the cases as suffering from tuberculosis on presumption that these patients would have taken entituberculous treatment which altered the histological picture. But in our patients there was no history of previous entituberculous treatment, so these patients were diagnosed as non-specific ileitis because in the follow up study these patients were relieved of symptoms and become well only by antibiotic therapy and not by antituberculous treatment, Therefore, by this it is inferred

that after confirmation of diagnosis by histological examination in such cases antibiotic therapy should be started to avoid undue exposure to the antituberculous drugs.

In our study, earcinome of stomach, careinome of gall bladder, carcinoma of caecum, carcinome of colon and Hodgkin's lymphoma of colon were also observed as the cause of abdominal pain, Breasch and Mon in 1967 reported that most common presenting symptom was abdominal pain in the pathology related to retroperitoneal compartment. In our series also, the diseases of retroperitoneal region i.e. renal cell carcinome, carcinome head of pancreas and retroperitoneal fibros arcoma munifested with abdominal pain. In the patient who suffered from renal cell carcinoma intravenous pyelogram could not reveal the disease which was later established on laparotomy and histological examination. The experience of Gerei et al (1959) was similar to our findings where they stated that it should not be forgotten that infaction and malignant diseases of kidney may be present even when urographic appearances are normal. This point was illustrated by their one patient with renal cell carcinoma as a source of obscure fever.

Mobile coecum with its chronic valvulus was discussed as a cause of abdominal pain by Rokintsky

(1941), Carslaw (1928) Lockhart Mummary (1934) and Banerjee (1954). We also had the same experience with 6.7 percent patients where pain was relieved after caecopexy in patients having mobile caecum. In one case we came across malrotation of gut with intestinal obstruction which was a persistant cause of abdominal pain. Janik et al (1979) had also the same opinion. They reported congenital gastrointestinal anomalies, which involve arrest of rotation with obstruction as a source of pain. Other conditions namely polycystic disease of liver and kidneys. mobile spleen and kidney, redundant pelvic colon with it's recurrent volvulus were also established as the acticlogical factor for abdominal pain. Duodenal ulcer, cirrhosis of liver, fatty changes of liver, retroperitoneal fibrosis and postoperative adhesions in bowel also caused non-specific abdominal pain.

on analysis of results of laparotomy, it was noted that 23 patients had non-specific pain in abdomen, Out of these 23 patients diagnosis was established in 95.7 percent cases and in 4.3 percent cases no diagnosis was established. In 37 patients pre-operative diagnosis was nade, but in 45.8 percent of these cases, the diagnosis changed after imperature and remained the same in 54.2 percent cases. So, out of 60 cases, a definite esticlogy was satisfiabed in

65.0 percent cases while in 33.3 percent cases preoperative diagnosis was confirmed on emploratory laparotomy. After laparotomy, 71.5 percent patients improved completely while in 23.3 percent of cases the course of disease remained unaltered. These 23.3 percent cases were suffering from advance intra abdominal malignancy (13 patients) and retroperitoneal fibrosis (1 patient), where definitive surgery was not possible to eradicate the disease. A complication rate of 3.3 percent and death rate of 1.7 percent was noted in the potient series. In the terms of positive findings and morbidity and mortality, these findings are comparable with findings of Keller and Williams (1965), where positive findings were noted in 82 percent, morbidity in 18 percent and mortality in 4 percent. They considered complication rate of 10 to 15 percent as acceptable risk in the face of generally high yield of positive diagnosis and improvement rate. Therefore, exploratory laparotomy should be considered an important procedure in the diagnosis of chronic abdominal pain.

On the grounds of positive findings and different setiological factors, our results are comparable with the results of Rothman et al (1977). In our series, exploratory laparotomy delded positive findings in 98.3 percent of the 60 patients. In 48.3 percent patients

an inflammatory lesion was detected. The most frequent findings in the group was abdominal tuberculosis in 20 percent patients, neoplastic disease accounted for 21.7 percent patients and carcinoma of gall bladder was noted in 5 percent cases. Other diseases responsible for abdominal pain accounted for 28.3 percent cases. In their series Rothman et al reported 82 percent positive yield of the 27 patients, Inflammatory disease were noted in 22.2 percent with a frequent finding of pencreatitis in 14.8 percent. Neoplastic disease accounted for 68.2 percent in their study and carcinoma of pancreas was noted in 27.7 percent cases. In 11.1 percent cases, other diseases of abdominal viscers and retroperitonsum were detected by them. Therefore, it is seen that the positive findings were more or less equal in both the series. Inflammatory diseases were noted in high percentage of cases to cause abdominal pain in the present series while they reported neoplastic diseases in high percentage. In our series abdominal tuberculosis was found a more frequent cause of abdominal pain and only two cases of pencreatitis were reported, while, Rothman et al worked out pancreatitis as a cause of abdominal pain in high percentage of patients; no case of abdominal tuberculosis was noted by them. In neoplastic diseases they reported a high incidence of carcinome of

pancreas while in our series carcinoma of gall bladder was found in higher percentage. The incidence of carcinoma of stomach and carcinoma of caecum was also nearly equal to it. In their series, Rothman et al did not report any case of psychosometic disorder. In our work also, no case of primary psychiatric disease was noted. Three patients had psychosomatic disorders namely, anxiety neurosis, agitated depression and depression, which were secondary to the chronic abdominal pain where a definite organic disease of abdomen was present to cause pain. On the other hand Woodhouse et al (1979) found psychosomatic disorders in 25 percent of their patient population and discussed that chronic abdominal pain was more often a psychiatric than a surgical symptom and a combined approach by both the specialities should be made.

In 1968, Devor and Knauft, reviewing their records of patients with abdominal pain who underwent laparotomy concluded. "Laparotomy is indicated if the operation is to be the part of the patients' overall treatment program but is contraindicated if the justification for surgery is the expectation of finding an anatomic abnormality". In the present study, anatomical anomalies were noted in quite high number of cases and the need of laparotomy was justifiable to correct the anomalies. As in one patient who had taken

drug treatment for abdominal pain for a quite long time, volvulus of caecum with gengrene was disclosed at the time of emergency operation. Postoperatively. patient improved and was relieved of abdominal pain. Other patients, who were diagnosed as cases of mobile caecum on laparotomy, became symptom free after operation. In another patient, who had long standing abdominal pain, malrotation of gut was disclosed at the time of operation of acute intestinal obstruction, which was corrected and patient became well after operation. Therefore, keeping in view the acute abdominal catastrophe, which can take place because of these enatomical abnormalities, it became necessary to say that exploratory laparotomy could be undertaken even to find and correct these abnormalities, contrary to the belief of Devor and Knauft.

So, because of high yield of positive findings, minimal operative and post operative risk, the exploratory laparotomy is frequently of real value in selected patients with chronic abdominal pain because it is most rewarding in these patients.

SUMMARY AND CONCLUSION

In the present series, 60 patients with chronic abdominal pain of both saxes and of all age groups ranging from 5 to 65 years of age were studied at M.L.B. Medical College and Hospital, Jhansi from May, 1981 to May, 1982. All the patients had abdominal pain for two months or more. Only those patients were included in the study who had undergone conservative treatment previously and afterwards treated by general surgeons. All gymaecological and obstetric admissions were excluded. When the patient was admitted, a thorough clinical history and physical examination was carried out and recorded. In all patients complete haemogram was done as a routine. Urine was also examined routinely. Other special pathological and biochemical investigations were also carried out whenever indicated. Different radiological examinations were also done when needed to establish the diagnosis. A psychiatric check up of selected patients was also carried out when suspicion arose about the mental state of patient. After that thoroughly investigated selected patients were subjected to exploratory laparotomy. Operative findings were noted and on the basis of those findings. it was attempted to make a diagnosis of disease process. In those cases where there was a doubt about the diagnosis even on laparotomy, bloosy of affected

tissue was taken and the diagnosis was established after histopathological examination.

In this series a definite diagnosis was made in 98.3 percent cases. Out of 23 patients, who had non-specific abdominal pain, diagnosis was established in 22 patients; in one patient no diagnosis could be made out. On the other hand, 37 patients were diagnosed preoperatively and it was seen that the diagnosis changed in 17 patients and remained the same in 20 patients when the results were compared with preoperative diagnosis after laparotomy. After laparotomy 71.5 percent patients improved while 23.3 percent patients not improved. A complication and death rate of 3.3 percent and 1.7 percent was noted respectively in this study.

Should be considered seriously in selected patients when thorough and repeated studies do not reveal the cause of abdominal pain. If thorough, detailed history and physical examination reveal no helpful leads or positive findings, if all the laboratory tests give no clues, if radiological studies also give so clues for diagnosis, and the patients continue to look chronically ill; then one should think seriously of abdominal exploration. The basis for our advocacy of this procedure is the fact that the abdominal cavity

and retroperitoneal region cannot be examined adequately or visualised thoroughly with the available diagnostic procedures except by exploration. This is in contrast to other systems, such as nervous system, respiratory system or the cardiovascular system, where fairly precise examination and visualization are possible, so that one may say with some assurance whether disease is present or not. Exploratory laparotomy should be considered as one of the steps in a planned study of selected patients with chronic abdominal pain. In the selection of patients, care should be used to exclude those who have had the uncommon clinical syndrome of abdominal pain as in young female "irritable colon syndrome" as described by Chaudhary and True love (1962). These people have good health between attacks, look well and have no other evidence of organic disease.

All the patients with abdominal pain should have radiological examination of abdoman. When any disease is detected an examination, operation should be planned and the rest of the abdomes and the retroperitorical region should be thoroughly investigated. Most observers would agree about this, There is some question, however, is the minds of many clinicians, whether exploratory is the minds of many clinicians, whether exploratory improved the examination and investigations of the parisoned when examination and

does not reveal any psychosomatic disorder. Some think the procedure is too radical; others prefer treatment with drugs in the hope that improvement will occur and still other prefer continued observation and repeated investigation until the cause of the pain become obvious. However, when a patient has been ill for a long time with abdominal pain and comes to the clinician with the hope that something may be found and his symptoms relieved, he should be advised to undergo exploratory laparotomy after through study if it is still thought that organic disease is present. These patients should not be treated by repeated expensive and uncomfortable investigations, antibiotic therapy and psychotropic drugs, because they become chronic attender and such non-specific treatment only serves to confuse the clinical picture further.

of planned series of disgnostic procedures, does not reveal a disgnosts, then we will have done every-thing possible for the patient. Therapeutic trial can be given subsequently with antibiotics or with other drugs, Until abdominal exploration is done in these patients, we feel that all manners of therapy should be without except in certain selected patients, who, one suspects, should have an adequate trial of antibiotic thatapy first to see if some hidden disease can be

brought under control.

Emploratory Laparotomy performed in 60 patients with chronic abdominal pain resulted in a positive yield of 98.3 percent. The complication occurred in 3.3 percent and death in 1.7 percent. These findings indicate that it is appropriate to include emploratory Laparotomy in the armamentarium for diagnosis of chronic abdominal pain.

<del>\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*</del>

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<sup>6</sup>\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

# APPENDIX

#### CASE SHEET

## "ROLE OF EXPLORATORY LAPAROTOMY IN CHRONIC ABDOMINAL PAIN".

M.R.D. No.

Sl.No.

1. Name of patient

1 14 14 14 13 13 15 15

2. Age, Sex & Religion

3. Marital status

4. Address

5. Date of admission

6. Date of discharge

7. Occupation

8. Secio Economia status

9. Chief presenting complaint

Duration

(1) Pain in abdomen

### Other associated symptoms

(11) Feren

(iii) Anoreoda

(iv) Vomitting

(v) Dierrhoea

(vi) Constipation

(vii) Malaena

(viii) Lump in abdomen

(ix) Platulence and dyspepsia

(x) Others

10. History of present illness:

11. Past history :

12. Family history :

13. Personal History :

14. General examination :

Appearence Decubitus Pallor
Jaundice
Cyanosis
Clubbing
Oedema
Lymph Nodes
Hydration
Pulse
B.P.
Temperature

15. Systemic examination :

(A) Gastro Intestinal system
Inspection
Shape of abdomen
Planks
Umbilious
Venous prominence
Any visible lump
Any visible pulsation

Palpation
Liver
Spleen
Rigidity
Gaurding
Rebound tenderness
Any pulsation
Any venous prominence
Any lump palpable
Any other positive sign

Percussion Shifting duliness Fluid thrill Any other finding

#### **Auscultation**

Bovel sounds

- (1) Normal
- (ii) Borborygai
- (111) Diminished
- (IV) Absent

Hernial sites

Per-rectal examination

- (B) Nervous system
- (C) Cardio vaecular system
- (D) Respiratory system
- (E) Genito urinary system
- 16. Investigation reports :
- 17. Radiological examination report :
- 18. Psychiatric check up :
- 19. Pre-operative diagnosis :
- 20. Operative findings :
- 21. Tissue taken for biopsy :
- 22. Histopathology report :
- 23. Final diagnosis :